



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/440,246	11/15/1999	AHMED GHEITH	M-8016-US	2706
33438	7590	11/30/2004		
HAMILTON & TERRILE, LLP P.O. BOX 203518 AUSTIN, TX 78720			EXAMINER TODD, GREGORY G	
			ART UNIT	PAPER NUMBER
			2157	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/440,246

Applicant(s)

GHEITH, AHMED

Examiner

Gregory G Todd

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,11-15,17,19,21-24,26-40 and 44-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,11-15,17,19,21-24,26-40 and 44-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

This is a fourth office action in response to applicant's amendment filed, 19 August 2004, of application filed, with the above serial number, on 15 November 1999 in which claim 9 has been amended and claims 48-49 have been added. Claims 1-7,9,11-15,17,19,21-24,26-40 and 44-49 are therefore pending in the application.

It is noted that Applicants state only Claim 9 as having been amended, however, Claim 47 is also amended and will be treated as amended.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 9, 11-13, 17, 19, 21-24, 26-31, 33, 36-40, and 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert et al (hereinafter "Lambert", 6,038,601) in view of Hon et al (hereinafter "Hon", 6,185,608).

3. As per Claim 45, Lambert discloses a content caching and retrieval system that facilitates reusability of generated electronic files, wherein Lambert discloses:

a processor (at least col. 3, lines 37-40);

a computer readable medium coupled to the processor (at least col. 3, lines 44-51);

generated electronic files stored in a storage medium, each generated electronic file includes an identifier that identifies generated presentation information stored in the file (eg. the ICEXPIRE tag included in the file) (at least col. 12, lines 38-60; col. 13, lines 30-45); and

a computer readable representation received by the system from a client computer system, the computer readable representation having a presentation state signature based on the presentation state defined, at least in part, by one or more parameters (link) selected by a user interacting with a file displayed by the client computer system, wherein the computer readable representation is useful to identify one of the generated electronic files in which stored presentation information is associated with the presentation state upon which the signature is based (URL link selected by the client for the new page) (at least col. 15, lines 34-40, 59-66);

wherein the computer readable medium includes a routine executable by the processor to determine if the presentation state signature of the computer readable representation identifies one of the generated electronic files stored in the memory of the system, to retrieve any identified generated electronic file and to serve the retrieved file to the client computer system (at least col. 5, lines 55-60).

Lambert does not explicitly disclose *dynamically* generated files as being cached. However, the use and advantages for caching dynamic content is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of

Art Unit: 2157

Hon et al (at least col. 5, lines 16-39) Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Hon's use of the caching server caching the dynamic content a user has requested and saving it in a file for later use as Lambert discloses caching pages a client will potentially access and to utilize the advantages of Hon's system of having different files stored in the cache for different groups of people would fulfill Lambert's goal of having pre-fetched content.

4. As per Claim 1.

- a subsequent presentation state computation routine operable to cause at least one subsequent presentation state to be computed based on the presentation state signature (a child page URL being pre-fetched from an initial parent page) (at least col. 15, lines 34-40);

- a presentation state signature computation routine operable to determine a presentation state signature for one or more subsequent presentation states (hashing a present or future URL) (at least col. 20, lines 43-60).

Lambert discloses pre-fetching child pages from a current page a user requests and looking up the child page URL in a hash table and therefore subsequent URL's are previously hashed by the server with a capable signature computation routine.

5. As per Claim 2.

- the subsequent presentation state computation routine and the presentation state signature computation routine are encoded in the computer readable medium as instructions executable on the processor, the computer readable medium being one of a

Art Unit: 2157

magnetic storage medium, an optical storage medium, and a communications medium conveying signals encoding the instructions (at least Fig. 1B).

6. As per Claim 3.

- at least a portion of the presentation information is encoded in a markup language (at least col. 15 line 63 - col. 16 line 2).

7. As per Claim 4.

- the markup language is Hypertext Markup Language (HTML) (at least col. 15 line 63 - col. 16 line 2).

8. As per Claim 5.

- a presentation information computation routine (algorithm) operable to compute subsequent presentation information (child pages) based upon the at least one subsequent presentation state (at least col. 20, lines 62-67; col. 16, lines 28-39).

9. As per Claim 6.

- a plurality of additional computer readable representations from one or more client computer systems, each of the computer readable representations having a presentation state signature based on a presentation state defined, at least in part, by one or more parameters (link) selected by a user interacting with a file displayed by one of the client computer systems that are useful to identify one of the generated electronic files in which stored presentation information is associated with the presentation state upon which the signature is based (URL link selected by the client for the new page) (at least col. 15, lines 34-40, 59-66);

wherein the routine is further executable by the processor to determine if the presentation state signatures of the computer readable representations identify one of the generated electronic files stored in the memory of the system, retrieving the described generated electronic files, and serving the retrieved files to the client computer system from which the computer readable representation was received (at least col. 5, lines 55-60).

10. As per Claim 7.

- a subsequent presentation state computation routine operable to cause at least one subsequent presentation state to be computed based on each presentation state signature (child page of the child page, level 2, etc.) (at least col. 16, lines 4-11; col. 20 line 62 - col. 21 line 26)

a presentation state signature computation routine operable to determine a presentation state signature for each subsequent presentation state (child page URL (second presentation state) is looked ahead on having already been hashed and being in the hash table) (at least col. 20, lines 43-60; col. 16, lines 4-11).

11. As per Claim 9.

- the computer readable representation is universal resource locator that includes a filename and state information for one of the generated electronic files (domain name of hashed URL and child html page) (at least col. 16, lines 4-11; col. 20, lines 43-60).

12. As per Claim 11.

- a file cache operable to store the generated electronic files (at least col. 34, lines 22-29).

Art Unit: 2157

13. As per Claim 12.

- the file cache is a file server computer system (at least col. 34, lines 22-29).

14. As per Claim 13.

- the presentation state signature computation routine uses a hashing function to determine the presentation state signature (see above rejection for Claim 1) (at least col. 20, lines 43-60).

15. As per Claim 17.

- each computer readable representation is a Universal Resource Locator (URL) comprising the presentation state signature based on the presentation state (associating hash value in hash table with URL) (at least col. 20, lines 43-67; col. 16, lines 28-39).

16. As per Claim 19.

- the computer readable medium further includes state information that at least one subsequent presentation state includes version information of the file displayed by the client computer system (eg. when page was last accessed) (at least col. 34 line 61 - col. 35 line 12).

17. As per Claim 21.

- a file cache and a look-ahead manager, the look-ahead manager operable to perform at least one of:

determining if the file cache includes a generated electronic file having presentation information characterized by the presentation state signatures for one or more subsequent presentation states (at least col. 5, lines 55-60);

Art Unit: 2157

causing a presentation information computation routine to compute subsequent presentation information based upon one or more subsequent presentation states (lookahead algorithm computing mutli-level child pages) (at least col. 20, lines 5-34, 62-67).

18. As per Claim 22.

- the determining if the file cache includes a generated electronic file includes searching the file cache for a file having a filename (domain name of hashed URL) including the presentation state signature from the computer readable representation (at least col. 16, lines 4-11; col. 20, lines 43-60).

19. As per Claim 23.

- a web server application operable to receive the computer readable representation (inherently, an application is used on a caching server, see col. 6, lines 25-55 for caching server details) and to serve the retrieved file to the client computer system (at least col. 5, lines 55-60).

20. As per Claim 24.

- the routine comprises a web server application (at least col. 5, lines 55-60).

21. As per Claim 26.

- the client computer system is one of a plurality of interconnected client computer systems operating in a distributed computer environment and coupled to the server computer system (at least col. 2, lines 24-34).

22. As per Claim 27.

- the plurality of interconnected client computer systems and the server computer system are coupled via a network (at least col. 2, lines 24-34).

23. As per Claim 28.

- network is the Internet and each of the files are web pages (at least col. 1, lines 13-17).

24. As per Claim 29, Lambert discloses a method of caching and retrieving cached generated files that each include presentation information characterized by respective presentation states, wherein each generated file is associated with a file identifier that is derived from state information that describes contents of the associated generated electronic file and the file is operable to be provided by an application running on a server computer system to at least one client computer system, wherein Lambert discloses:

receiving a file request that includes state information based on selections of a user interacting with a web page using at least one client computer system (at least col. 5, lines 55-60);

determining whether the file request identifies one of the cached generated files (at least col. 5, lines 55-60);

retrieving the generated file identified by the file request and transmitting the file to the at least one client computer system if the file exists in the cache (at least col. 5, lines 55-60);

computing presentation information based on the information in the file request when a generated file does not exist in the cache (at least col. 6, lines 25-38);

saving the computed presentation information in a file in the cache (local storage), thus creating a generated file, and transmitting the generated file to the at least one client computer system (at least col. 12, lines 38-48).

Lambert does not explicitly disclose *dynamically* generated files as being cached. However, the use and advantages for caching dynamic content is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Hon et al (at least col. 5, lines 16-39) Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Hon's use of the caching server caching the dynamic content a user has requested and saving it in a file for later use as Lambert discloses caching pages a client will potentially access and to utilize the advantages of Hon's system of having different files stored in the cache for different groups of people would fulfill Lambert's goal of having pre-fetched content.

25. As per Claim 30.

- the file request includes at least one of a filename based on the first state (domain name of page), and first state information (at least col. 16, lines 4-11; col. 20, lines 43-60).

26. As per Claim 31.

- the file request includes a filename computed from the information based on selections by a user interacting with a web page using a hash function (at least col. 20, lines 43-60).

Lambert discloses pre-fetching child pages from a current page a user requests and looking up the child page URL in a hash table, which would implicitly mean that the

Art Unit: 2157

pre-fetched, and therefore subsequent, URL's are previously hashed with a hash function.

27. As per Claim 33.

- the file request is a URL (at least col. 20, lines 62-67; col. 16, lines 28-39).

28. As per Claim 36.

- computing at least one subsequent state based on the selections by a user interacting with a web page (at least col. 15, lines 59-66);

- computing a signature of the at least one subsequent state based on at least one subsequent state (hashing a present or future URL) (at least col. 20, lines 43-60); and

- including the signature of the at least one subsequent state and the at least one subsequent state in the presentation information (associating hash value in hash table with the URL) (at least col. 20, lines 43-67; col. 16, lines 28-39)..

29. As per Claim 37.

- method encoded in a computer readable medium as instructions executable on a processor, the computer readable medium being one of a magnetic storage medium, an optical storage medium, and a communications medium conveying signals encoding the instructions (at least Fig. 1B).

30. As per Claim 38.

- Generated files created in accordance with the method of claim 29 (at least col. 16, lines 49-60; col. 15, lines 41-52; col. 16 line 66 - col. 17 line 10).

31. As per Claim 39.

- at least a portion of the presentation information of each generated file is encoded in a markup language (at least col. 15 line 63 - col. 16 line 2).

32. As per Claim 40.

- the markup language is one of Hypertext Markup Language (HTML) (at least col. 15 line 63 - col. 16 line 2).

33. As per Claim 44.

- the web page is a product configuration web page and the file request is a Universal Resource Locator (URL) that includes state information comprising information based on the user configuration selections (associating hash value in hash table with URL) (at least col. 20, lines 43-67; col. 16, lines 28-39).

34. As per Claim 46, Lambert discloses a content caching and retrieval system that facilitates reusability of cached generated electronic files, wherein Lambert discloses:

means for receiving a file request that includes information based on selections of a user interacting with a web page using at least one client computer system (at least col. 5, lines 55-60);

means for determining whether the file request identifies one of the cached generated electronic files (at least col. 5, lines 55-60);

means for retrieving the generated electronic file identified by the file request and transmitting the file to the at least one client computer system if the file exists in the cache (at least col. 5, lines 55-60);

means for computing presentation information based on the information in the file request when a generated file does not exist in the cache (sending request to retrieve content) (at least col. 5, lines 55-60); and

Lambert does not explicitly disclose dynamically cached data or saving a previously non-cached document in the cache as a file. However, the use and advantages for caching dynamic content is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Hon et al (at least col. 5, lines 16-39) Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Hon's use of the caching server caching the dynamic content a user has requested and saving it in a file for later use as Lambert discloses caching pages a client will potentially access and to utilize the advantages of Hon's system of having different files stored in the cache for different groups of people would fulfill Lambert's goal of having pre-fetched content.

35. As per Claim 47.

wherein the one or parameters selected by a user include configuration options selections for one or more configurable products for display in accordance with the associated dynamically generated electronic file (at least Lambert col. 20, lines 43-67; col. 16, lines 28-39; Hon col. 5, lines 26-58; col. 2, lines 58-67).

36. As per Claim 48.

wherein the selections of the user interacting with the web page include configuration options selections for one or more configurable products for display in

Art Unit: 2157

accordance with the associated dynamically generated electronic file (at least Lambert col. 20, lines 43-67; col. 16, lines 28-39; Hon col. 5, lines 26-58; col. 2, lines 58-67).

37. As per Claim 49.

wherein the one or parameters selected by a user interacting with a file displayed by the client computer system include configuration options selections for one or more configurable products for display in accordance with the associated dynamically generated electronic file (at least Lambert col. 20, lines 43-67; col. 16, lines 28-39; Hon col. 5, lines 26-58; col. 2, lines 58-67).

38. Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert et al (hereinafter "Lambert", 6,038,601) in view of Hon et al and further in view of Colby et al (hereinafter "Colby", 6,006,264).

Lambert discloses a server determining whether a file exists in a cache (at least col. 5, lines 55-60) and if not it computes the presentation information from another server. Lambert and Hon do not disclose the server determining cache files from a file not found error such as an HTTP error 404. However, the use and advantages for using such an error detection is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Colby (at least Colby col. 12, lines 6-13). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the error detection of Colby's server with Lambert and Hon's file-detecting cache server because this would enhance the probability of correctly determining if the web page is in the server's cache, and using an http 404

error is a commonly used method of telling a system a page is no longer valid on the internet; with Lambert and Hon's server needing some way of determining if the web-page to pre-fetch is already on the system, so a common internet method of determining if a file is on a server is to query the page and if an error is detected in the page retrieval, report it to the requesting system. Thus, Lambert and Hon's server would detect the error and know that the page is no longer valid and attempt to re-fetch it from another server.

39. Claims 14-15 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert et al (hereinafter "Lambert", 6,038,601) in view of Hon et al and further in view of Mattis et al (hereinafter "Mattis", 6,289,358).

Lambert discloses using a hash table to look up a document's URL (presentation information state and signature) (at least col. 20, lines 43-60). Lambert and Hon do not explicitly disclose using a one-way hash function such as Snefru, N-Hash, MD5, Secure Hash Algorithm (SHA), RIPE-MD, or HAVAL. However, the use and advantages for using such a hashing function is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Mattis (at least Mattis col. 28, lines 50-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Mattis' one-way URL hashing function (MD5) with Lambert and Hon's hashing because this would enhance the expandability and compatibility of Lambert and Hon's system and also utilize the different advantages of using the one-way hash function, thus allowing multiple documents to be quickly and

easily stored and looked up in Lambert and Hon's hash table using the URL-specific hash value.

Response to Arguments

40. Applicant's arguments filed 19 August 2004 have been fully considered but they are not persuasive.

Applicants argue, substantially, that a) Lambert's ICEXPIRE tag does not identify generated presentation information stored in the file; b) Lambert does not suggest "a computer readable representation received by the system from a client computer system, the computer readable representation having a presentation state signature based on the presentation state defined, at least in part, by one or more parameters (link) selected by a user interacting with a file displayed by the client computer system"; c) Hon does not suggest "a computer readable representation received by the system from a client computer system, the computer readable representation having a presentation state signature based on the presentation state defined, at least in part, by one or more parameters (link) selected by a user interacting with a file"; and d) Lambert and Hon do not teach "each generated file is associated with a file identifier that is derived from state information that describes contents of the associated generated electronic file".

In response to applicant's argument a), Lambert teaches the ICEXPIRE HTML tag having four attributes, two that control lookup behavior and two that define the expiration date (see col. 13, lines 38-45). The tag is stored in the page (file) and

identifies via, for example, the two attributes controlling lookup behavior to identify which URL's that are set to expire and thus read on the broad limitations of the claim including identifying any generated presentation information of the file.

In response to applicant's argument b), Lambert teaches a user going to an initial page and fetching child links from that initial page and upon a user selecting a child link and interacting on that child link page, fetching more child links off of that original child link page and thus based on the user's behavior and interaction with child pages the user defining the presentation state signature.

In response to applicant's argument c), Hon is not relied on as teaching the limitations argued by the Applicant. However, Hon does teach these features (see Fig. 2; col. 5, lines 16-40), as Hon teaches a user selecting parameters (interacting with a file) on a page and saving or storing the dynamically generated page (presentation state) and accordingly giving it a unique file name (presentation state signature).

In response to applicant's argument d), the recitation "each generated file is associated with a file identifier that is derived from state information that describes contents of the associated generated electronic file" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Conclusion

41. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

42. Previously cited Copeland et al, Batchelder et al, Holt, III, Chen et al, Jiang et al, Brown et al, Mogul, Becker et al, Kavner, Berstis, Thacker et al, Parthasarathy et al, Nelson et al in addition to newly cited Eilbott et al and Gupta et al are cited for disclosing pertinent information related to the claimed invention. Applicants are requested to consider the prior art reference for relevant teachings when responding to this office action.

43. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory G Todd whose telephone number is (571)272-4011. The examiner can normally be reached on Monday - Friday 9:00am-6:00pm w/ first Fridays off.

Art Unit: 2157

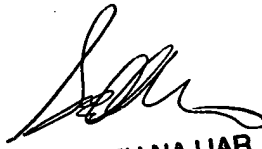
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory Todd 

Patent Examiner

Technology Center 2100


SALEH NAJJAR
PRIMARY EXAMINER